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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,279	08/31/2006	Naokazu Kobayashi	295538US0PCT	9398
22850	7590	11/12/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
LENIHAN, JEFFREY S				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
11/12/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

### Office Action Summary

**Application No.**

10/591,279

**Applicant(s)**

KOBAYASHI ET AL.

**Examiner**

Jeffrey Lenihan

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 09/24/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

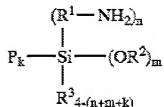
1. This Office Action is responsive to the amendment filed on 07/31/2009.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

***Claim Rejections - 35 USC § 103***

4. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al, JP 2001-114936 (of record), in view of Kobayashi et al, WO 2003/029299 (of record). Tsukimawashi et al, US2004/0254301, is utilized as an equivalent English translation of WO 2003/029299.
5. As noted in previous Office Actions, incorporated herein by reference, Kobayashi discloses a composition used for the production of tires (¶0001,0076) comprising a mixture of 5 to 95% by weight of copolymer (a) and 5 to 95% by weight of copolymer (b) (for claim 1) (¶0008). Copolymer (a) may be a polymer of a conjugated diene alone or a copolymer of a conjugated diene and a vinyl aromatic monomer, wherein said copolymer (a) can have a weight average molecular weight ( $M_w$ ) of 90,000 to 2,000,000 (abstract) and contains a functional group chosen from the group comprising a hydroxyl group, an alkoxysilyl group, and tin (for claim 3), corresponding to claimed component (II) (for claim 1) (¶0008, 0010). Copolymer (b) may be polymer of a conjugated diene alone or a copolymer of a conjugated diene and a vinyl aromatic monomer, wherein said copolymer (b) can have  $M_w$  of 1,000 to 90,000 (abstract) and contains at least one functional group selected from the group comprising alkoxysilane and amines (¶0008,

0010). Kobayashi further discloses that the composition may comprise 10 to 100 parts by weight (pbw) of an extender oil (for claim 4) (¶0065) and 2 to 100 pbw of carbon black (for claim 5) (¶0069).

6. Kobayashi is silent regarding the use of a polymer having claimed formula (1).
7. Tsukimawashi discloses a (co)polymer of a conjugated diene used in the preparation of tires (¶0192), wherein said (co)polymer is represented by the following formula (1), corresponding to claimed formula (1) (for claim 1) (¶0037-0038)



In the above structure, P may be a polymer of a conjugated diene or a copolymer of a conjugated diene and a vinyl aromatic monomer. The examiner notes that when R<sup>2</sup> is an alkyl group, as allowed by Tsukimawashi, the conjugated diene copolymer contains an amine group and an alkoxysilyl group, corresponding to copolymer (b) of Kobayashi. Tsukimawashi teaches that the conjugated diene copolymer may be blended with additional rubbers to form a rubber composition (¶0192), wherein said composition may contain 30% by weight or more of the conjugated diene copolymer (¶0205).

8. As discussed above, Kobayashi and Tsukimawashi both disclose rubber compositions for the production of tires, wherein said compositions contain similar amounts of a (co)polymer of a conjugated diene alone or in combination with a vinyl aromatic monomer, wherein said (co)polymer contains an amine group and an alkoxysilyl group. Kobayashi and Tsukimawashi both also disclose that their respective

copolymers act to bind fillers such as carbon black in rubber compositions. The examiner therefore takes the position that the copolymer represented by formula (1) of Tsukimawashi and copolymer (b) of Kobayashi are functional equivalents used for the same purpose in the art; as a result, the examiner takes the position that it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to modify the composition of Kobayashi by substituting the copolymer of formula (1) of Tsukimawashi for copolymer (b) of Kobayashi to produce a composition comprising 30% by weight or more of the conjugated diolefin copolymer of formula (1) of Tsukimawashi, corresponding to claimed component (I) (for claim 1) and 70% of copolymer (a) of Kobayashi, corresponding to claimed component (II) (for claim 1) with the reasonable expectation of producing a compatibilized rubber/carbon black composition suitable for use in the production of tires.

### ***Response to Arguments***

9. Applicant's arguments filed 7/31/2009 have been fully considered but they are not persuasive.
10. Applicant's arguments regarding the makeup of the composition rendered obvious by the prior art are addressed in the rejection presented above.
11. Regarding the allegedly unexpected results, the examiner maintains the position that the allegedly unexpected results are not commensurate in scope with the instant claims. The examiner notes that the examples cited by applicant disclose compositions wherein claimed component (I) and claimed component (II) are both styrene/butadiene

copolymers; the claims as written, however, allow either component to comprise only a units derived from a conjugated diene. Furthermore, as discussed above, the combination of Kobayashi and Tsukimawashi renders obvious a composition comprising 30% or more by weight of a copolymer of formula (1) of Tsukimawashi; the examples cited by applicant disclose composition containing 10% or less of the corresponding claimed component (I). Applicant therefore has not demonstrated unexpected results using a composition comparable to the composition rendered obvious by the prior art.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/  
Primary Examiner, Art Unit 1796

/Jeffrey Lenihan/  
Examiner, Art Unit 1796

/JL/